

In the Claims:

Clean and marked-up versions of the amended claims are also provided herein. Kindly substitute the clean version of the amended claims for the pending claims having the same claim number.

VERSION WITH MARKINGS SHOWING CHANGES MADE TO CLAIMS

1. (Twice Amended) A valve comprising:
a valve body including a metering chamber and a sampling chamber:
a first sealing ring having a first rounded stem-receiving portion
adapted to engage a valve stem; [and]
a valve stem having a dispensing passage adapted to be receivable by
the first sealing ring and adapted to slidably engage the first sealing ring in
contact with at least a portion of the first rounded stem-receiving portion; and
a second sealing ring having a second rounded stem-receiving portion,
the second sealing ring provided between the metering chamber and the
sampling chamber, wherein the second sealing ring is adapted to slidably
engage the valve stem in contact with at least a portion of the second rounded
stem-receiving portion.

13. (Twice Amended) The valve according to claim 1, [wherein the
valve body includes a metering chamber, a sampling chamber, and
further including a second sealing ring adapted to slidably engage the
stem, and,]

wherein the valve stem includes a transfer passage such that in the
valve-closed position the dispensing passage is isolated from the metering
chamber via said transfer passage, wherein, in the valve-open position, the
dispensing passage is in communication with the metering chamber and the
transfer passage is isolated from the metering chamber[, and,

wherein the second sealing ring includes a second rounded stem-
receiving portion adapted to engage the stem].

27. (Twice Amended) The valve according to claim 26 wherein the [first
and/or] second elastomeric material is selected from the group consisting of a
thermoplastic elastomer comprising a copolymer of about 80 to about 95
percent ethylene and a total of about 5 to about 20 mole percent of one or
more of 1-butene, 1-hexene and 1-octene; a styrene-ethylene/butylene-

styrene block co-polymer; an ethylene propylene diene rubber; a thermoplastic elastomer blend of an ethylene propylene diene rubber dispersed in a polypropylene polyethylene matrix; a butyl polyethylene; a butyl-polypropylene; and any mixtures thereof.

Please add the following new claim.

35. (New) The valve according to claim 25 wherein the elastomeric material is selected from the group consisting of a thermoplastic elastomer comprising a copolymer of about 80 to about 95 percent ethylene and a total of about 5 to about 20 mole percent of one or more of 1-butene, 1-hexene and 1-octene; a styrene-ethylene/butylene-styrene block co-polymer; an ethylene propylene diene rubber; a thermoplastic elastomer blend of an ethylene propylene diene rubber dispersed in a polypropylene polyethylene matrix; a butyl polyethylene; a butyl-polypropylene; and any mixtures thereof.

REMARKS

Claims 1-30 and 35 are pending in the present application. Claims 1, 13 and 27 have been amended to better define the invention. Claim 35 has been added to set forth additionally patentable subject matter. In view of the remarks and amendments presented herein, Applicants respectfully solicit a withdrawal of all rejections and a Notice of Allowability.

Applicants point out that this amendment is filed responsive to the Office Action dated May 2, 2002. A first Office Action was mailed April 17, 2002 but has, in essence, been replaced by virtue of the mailing of the May 2, 2002 Office Action. As indicated on page 2 of the May 2, 2002 Office Action, the time for response has now been restarted.

Associate Power of Attorney

Submitted herewith is an Associate Power of Attorney making the undersigned of record in the application.

PTO Telephonic Interview

Applicants thank Examiner Melvin A. Cartagena for the courtesies extended to Applicants' undersigned representative during the telephonic interview of June 26, 2002. The helpful dialog is believed to expedite placing the pending claims in condition for allowance.

Priority Claim

The specification has been amended to reflect the priority of the present application to previously-filed International Application No. PCT/EP00/01444. In accordance with 37 C.F.R. § 1.78(a)(3), a Petition to Accept an Unintentionally Delayed Priority Claim is filed herewith.

Supplemental Information Disclosure Statement

Attached herewith is a Supplemental Information Disclosure Statement and accompanying PTO Form 1449, along with copies of the references. Entry of these references is respectfully requested.

Specification

The Office Action objects to the specification due to the lack of different portions of the specification being labeled. Applicants have addressed this concern as set forth herein.

The Office Action objects to Claim 34 under 37 C.F.R. § 1.75(c) stating that the claim is in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other dependent claim. Applicants submit that this objection is moot in that Claim 34 was canceled by virtue of the Preliminary Amendment filed on September 24, 2001. Such cancellation has, in effect, been acknowledged by the Office in the May 2, 2002 Office Action Summary which lists Claims 1-30 as currently pending.

35 U.S.C. § 112

Claim 27 is rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. In particular, the Office Action objects to the recited phrase "and/or". Applicants have addressed this issue as evidenced by the amendment herein, and accordingly respectfully solicit a withdrawal of this rejection.

35 U.S.C. § 102

Claims 1, 7-10, 13, 19-22, 25 and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,037,013 to Howlett ("Howlett"). The Office Action argues that Howlett discloses a dispensing apparatus to be used with an aerosol container as seen in Figures 1-5 which is alleged to render the above claims unpatentable. Applicants respectfully traverse this rejection.

It is respectfully submitted that Howlett does not anticipate the present invention. "For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference". *In re Bond*, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990) citing *Diversitech Corp. v. Centure Steps, Inc.* 7 USPQ2d 1315, 1317 (Fed. Cir. 1988). As discussed in detail hereinbelow, Howlett does not disclose every recited element of the claims in question. Accordingly, Howlett does not anticipate such claims in accordance with 35 U.S.C. § 102.

The present invention is directed to a valve which is shaped to reduce the area of contact between sealing rings and the valve stem relative to conventional valves. As set forth in Applicants' background section, prior art valve seals, for the most part, contain ring apertures having square-cut edges. Such edges are believed to be disadvantageous in that they present a relatively high area of contact between the valve seal and valve stem, which often causes the valve stem to stick, pause, or drag during the actuation cycle. Applicants' claimed valve addresses these problems by employing first and second sealing rings having first and second rounded stem-receiving portions respectively. The first and second sealing rings are adapted to slidably engage the valve stem in contact with at least a portion of the first and second rounded stem receiving portions.

Howlett does not disclose all features of the invention. In particular, Howlett discloses a valve in which the stem 8 cooperates with an annular elastomeric seal 60. A close examination of seal 60 indicates the seal contacts stem 8 along edges which are square-cut, notwithstanding the presence of annular recesses 40 in the seal 60. In contrast to the present invention, Howlett does not disclose first and second sealing rings adapted to slidably engage the valve stem in contact with at least a portion of their respective rounded stem-receiving portions. As a result, Howlett does not anticipate the present invention.

In view of the above, a withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully solicited.

35 U.S.C. § 103

Claims 2-6, 11-12, 14-18, 23-24 and 29-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Howlett in view of U.S. Patent No. 5,772,085 to Bryant et al. ("Bryant"). The Office Action alleges that Howlett discloses all claimed features except for the point of contact between the seal and the stem being less than 90 percent, the sealing rings having more than one lobed surface and wells, the use of lubricants, and the process used to make the sealing rings. The Office Action cites Bryant for allegedly teaching an aerosol valve as seen in the FIGS. 1-26 with different configurations having multiple lobes as seen in FIGS. 2a-2g where the contact area is less than 90 percent, along with the use of lubricant. The Office Action concludes that the invention is obvious in view of Howlett applied in combination with Bryant. Applicants respectfully traverse this rejection.

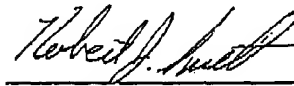
As set forth hereinabove, it is submitted that Howlett does not lead a person of ordinary skill in the art to the claimed invention. Bryant does not address the deficiencies of Howlett. At best, Bryant teaches the use of conventional square-cut seals. Bryant does not teach nor suggest employing seals with rounded-stem receiving portions in the manner recited by the present invention, and therefore does not render obvious the invention when applied in combination with Howlett.

In view of the above, a withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully solicited.

For the above reasons, Applicants respectfully traverse the rejections and objections set forth in the outstanding Office Action and request that they be withdrawn. Applicants respectfully contend that the application is in condition for allowance and requests the same. The Examiner is invited to contact the undersigned should there be any remaining questions or concerns.

Respectfully submitted,

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